ABSTRACT OF THE DISCLOSURE

A blast protective barrier system, termed a blast wall, is definable in terms of an x, y, z coordinate system. The system includes several substantially ground level (xy plane) pile caps, each itself having an x-axis elongate length, a y-axis width, and a z-axis depth, the x-axis length substantially defining the width of the barrier system. Each pile cap also includes an upper and lower xy plane surface, each of the upper surfaces including y-axis channels and each of the lower surfaces including several recesses. The system also includes a plurality of yz plane, y-axis elongate vertical concrete panels having an x-axis width, each panel pair having a lower y-axis edge proportioned for press-fittable securement within the y-axis channels of the upper xy surfaces of the pile caps. Positioned between opposing pairs of concrete panels is a volume of high shock-absorbent material, which material may take a variety of different forms including loose sand, gravel, pebbles, stones, inflatable and non-inflatable foams, enclosed cellular units having properties of high viscous damping, and a variety of acoustical and thermal insulative materials which also possess properties of shock and blast absorption. The system further includes substantially z-axis elongate piles, each having z-axis upper ends thereof proportioned for securement within the recesses of the lower xy plane surfaces of the pile caps.